Learning Styles: Implications for ESL/EFL Instruction

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Teaching English as a second or foreign language (ESL/EFL) has changed tremendously over the past two decades. Curricula, teaching methods, and teaching materials have been developed to meet the changing needs of the ESL/EFL population. However, the curricula of many ESL/EFL programs, (like those in China) are still linear or systematic and do not allow much room for individualizing instruction.

Research on learning styles, on the other hand, has provided teachers with a different view of learning and demonstrated how to apply it to classroom teaching. An awareness of individual differences in learning has made ESL/EFL educators and program designers more sensitive to their roles in teaching and learning and has permitted them to match teaching and learning styles so as to develop students' potentials in second and foreign language learning. This article discusses ways to help ESL/EFL educators and program designers gain a better understanding of the human differences in learning and to assist them in selecting classroom teaching strategies when designing curricula.

Learning Styles

Definition Learning styles are internally based characteristics of individuals for the intake or understanding of new information (Reid 1995). All learners have individual attributes relating to their learning processes. Some people may rely heavily on visual presentation; others may prefer spoken language; still others may respond better to hands-on activities. It is evident that people learn differently and at different paces because of their biological and psychological differences (Reiff 1992). Naturally, these differences in learning abound in any ESL/EFL setting where students come from different cultural and educational backgrounds.

A learning style is multidimensional (Kinsella 1996). Its elements can be classified into five stimulus categories: environmental elements (sound, light, temperatures, design), emotional elements (motivation, persistence, responsibility), physical elements (perception, intake, time, mobility), sociological elements (self, partner, team, mentor, varied), and psychological elements (global/analytical, impulsive/reflective) (Reiff 1992). Clearly, learning styles include not only the cognitive domain, but also the affective and physiological domains (Oxford, Hollaway, Horton-Murillo 1992).

Assumptions Research on learning styles is based on the assumption that learners receive information through their senses and prefer some senses to others in specific situations (O'Brien 1989, Oxford and Ehrman 1993, Kroonenberg 1995). Usually, students learn more effectively when they learn through their own initiatives. When their learning styles are matched with appropriate approaches in teaching, then their motivation, performances, and achievements will increase and be enhanced (Brown 1994). Thus, researchers and educators try to establish optimal

environmental and psychological climates that foster learning by allowing students to learn in accordance with their own preferred learning styles.

Research Development

Since the late 20th century, educators and researchers have developed several instruments to assess students' learning styles (Dunn 1984). Dunn and Dunn (1972) developed an instrument to measure learning styles that included 18 elements related to environment, emotion, and sociology. Later Dunn, Dunn, and Price (1979) added elements such as hemispheric preference to this instrument.

During the 1970s, several other researchers such as Gregorc (1979), Hunt (1979), Schmeck, Ribich, and Ramanaiah (1977) also developed instruments and techniques to assess students' learning styles. Although these instruments differ, they share the goal of identifying the nature of human differences in learning and improving the effectiveness of teaching/learning by providing criteria for individualizing instruction (Ketchum 1987).

Research has tested some hypotheses about L2 learning. One of the most well-researched areas is field-independence (FI)/ field dependence (FD). FD/FI refers to how people perceive and memorize information (Chapelle 1995). The FD individual is a global learner who is socially oriented and extrinsically motivated. Conversely, the FI individual is an analytic learner who tends to work independently (Ramirez and Price-Williams 1974).

Results tend to show that FI correlates positively and significantly with language success in the classroom (Brown 1994, Chapelle 1995). Abraham (1985) found that L2 learners with FI styles were more successful in deductive lessons, while those with FD styles performed better in inductive lessons. Chapelle and Roberts (1986) also found a correlation between the FI style and language success. Chapelle and Abraham (1990) provided further data concerning the superiority of FI style in L2 learning.

In addition, learning style research has examined the effects of tailoring teaching to students' learning styles (Hansen-Strain 1989). It has shown that matching learning styles has a positive impact on students' achievements, interests, and motivation (Smith and Renzulli 1984). The results of several investigations of the potential interaction between learning styles and teaching approaches indicate that students' performances can be enhanced by adapting the instructional methods to individual differences in learning styles (Dunn, Dunn, and Price 1979; Wesche 1981; Sein and Robey 1991).

As a result, many educators such as Gagne (1993) and Kinsella (1996) have concluded that some instructional principles may optimize learning. They argued that identifying a student's learning style and providing appropriate instruction contribute to more effective learning (Sims and Sims 1995).

Developing the Two Brain Hemispheres

Brain theory research indicates that the two hemispheres of the brain process information differently (Williams 1983, Reiff 1992). Each hemisphere contributes its special functions to cognitive activities. The left hemisphere has the verbal, sequential, and analytical abilities. The

right, has the global, holistic, and visual-spatial functions (Levy 1983). Learners who prefer left-hemisphere approaches to processing information excel at analytical tasks and master abstract, factual, and impersonal material easily. Conversely, students who are right-hemisphere learners like to work collaboratively to achieve a common goal (Williams 1983).

Kinsella (1996) argued that students who have stronger verbal/analytical faculties may have easier access to the traditional teaching model—listening to lectures, reading textbooks, and completing writing assignments. But they are not necessarily developing the right-brain strengths that are crucial for problem solving and creativity.

Thus, teaching methods need to be varied to help students develop the flexible use of both hemispheres by helping students perceive information in both an analytical (field-independent) way and a relational (field-dependent) way. Also, teachers should balance classroom opportunities for students with different learning styles by selecting and designing activities for a variety of sensory modalities and brain-hemisphere strengths (See Table 1 below).

Implications: Matching Teaching Styles1 with Learning Styles

Diagnosing Learning Styles and Developing Self-aware ESL/EFL Learners

A knowledge of one's own learning style is essential in "learning to learn" (Smith and Associates 1990). Teachers should help students discover their own learning preferences and provide constructive feedback about the advantages and disadvantages of various styles. Also, teachers should respect the learners' present preferences and encourage their development, while at the same time creating opportunities for students to experiment with different ways of learning.

Instructors may use instruments and activities specially designed for L2 learners such as Willing's Activity Work Sheets (1989) and Kinsella's Classroom Work Style Survey (1996) to identify students' learning styles. Although this kind of assessment is not comprehensive, it does indicate students' preferred general learning habits. It also helps students understand their own learning styles so that they can capitalize on their strengths. As a result students can enhance their learning power by being aware of the style areas in which they feel less comfortable, and by working on their development, thus, providing avenues to foster their intellectual growth (Eliason 1995).

Similarly, teachers can use the survey results to identify strong style patterns in their classes, which they should consider when designing learning tasks. For example, in our ESL Teaching class at Northern Illinois University (NIU), Dr. Richard A. Orem, the instructor, used the SOS-L2 checklist to diagnose students' general learning styles. This showed us how to assess students' learning styles and made us more aware of our own strengths and weaknesses in learning so that we could effectively use our strengths and compensate for our weaknesses.

Implementing Learning Style Preferences by Varying Class Presentations

After identifying students' learning strengths, teachers should provide students with opportunities to learn through their modality strengths. Thus, diverse and high interest materials should be offered. These may include the creative use of video and audio materials, which may vary from heavy dependence on media for the structure and content of the lesson to only limited use of a blackboard to illustrate concepts or grammatical rules.

Lessons may be presented both visually and verbally and reinforced through various motivating language activities such as reflective reading and writing. In this way, students can learn in ways that best suit their styles and develop their modality strengths (Kroonenberg 1995).

A good case in point is the ESL Teaching class at NIU, where the students experience the effectiveness of diverse class presentations. The appropriate use of multi-media, like video recording, slide presentation, overhead projection, and realia, together with selective hands-on activities, has made lessons interesting and motivating to students.

Developing Self-directed Learners with Learning Strategies

Self-direction is essential in the active development of adults' abilities in learning (Smith and Associates 1990). It is especially important for L2 learners to be self-directed since it is impossible to give them direct guidance or instruction when they use the language outside the classroom. Clearly, ESL/EFL learners need to be empowered with a wide range of learning strategies to achieve competence and autonomy in learning the target language. This requires teachers to expand their knowledge of language teaching and learning strategies and to gradually develop students' flexibilities in learning.

Oxford (1990) posited that while presenting materials, teachers should provide colorful and motivating activities, personalized self-reflection tasks, some forms of cooperative learning, and powerful learning strategies to encourage self-direction in learning. Teachers should also consciously develop students' learning strategies (See Table 2 below) to help students approach challenging learning tasks. For example, teachers can let students use cognitive strategies such as note-taking and summarizing to sort and organize language information and prepare them for speech and written production. Teachers can have students apply compensation strategies such as guessing to comprehend a listening or reading passage and using circulation to communicate their ideas despite their knowledge gaps.

Different learning strategies benefit learners differently. After a certain amount of practice and use, students will know how and when to use learning strategies to deal with their language problems. Consequently, they will become comfortable with the idea of assuming responsibility for their learning.

Computer-assisted Instruction

It is difficult for teachers to keep all the learners actively engaged in the learning process and learning at the same pace (Wrigley and Guth 1992). Computer-assisted instruction (CAI) can help teachers solve this problem because the flexibility and capability of CAI make it possible to teach virtually anything from problem-solving skills to relatively simple cognitive learning by offering text and graphs with animation and sound (Lockard, Abrams, and Many 1997). CAI appeals to varied learning modalities and consequently meets the diverse needs of individual

students. With CAI, students can learn at a comfortable pace and interact directly and continually with computers that provide immediate feedback. Teachers can use CAI to enrich or supplement the basic instruction.

This requires that ESL/EFL programs build solid hardware and software resources to create optimal learning environments. For example, the ESL program in Elgin Community College, Illinois makes good use of ESL software packages such as Drill and Practice, and Tutorials to facilitate students' diverse needs. Students can choose what they want or need and work at convenient times and at their own pace.

Conclusion

ESL/EFL learners vary not only in terms of their purposes for learning English, but also in terms of individual differences in learning due to their educational, ethnic, and cultural diversities. To make ESL learning/teaching successful, educators must understand and respect individuals' diverse learning styles and make efforts to create optimal learning environments for learners.

Educators should employ instruments to identify students' learning styles and provide instructional alternatives to address their differences. Teachers should plan lessons to match students' learning styles while at the same time encouraging students to diversify their learning style preferences.

However, it is important to remember that all existing learning style instruments and learning strategies are in their infancy, and need further testing through classroom application (Oxford 1990). As ESL/EFL professionals, we need to deepen our understanding of the nature of human differences in learning so that we can maximize the potential of our flexible, open-ended curricula and individualized instruction.

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Table 1- Teaching Strategies for Both Sided Brain

Class Presentation	
Left hemisphere	**Right hemisphere**
presenting materials that are practical	presenting materials of personal, factual, impersonal, and social content
giving structured lectures with systematic instruction	giving lectures with varied visual illustrations
providing linear, sequential processing of input	providing opportunities for multisensory learning (auditory, visual, kinesthetic, and tactile)
using words to describe or define terms, rules or concepts	focusing on similarities and overall information
focusing on differences with detailed information	integrating component parts and organizing them into a whole
drawing conclusions based on reasons and facts	
Class-Related Activities	
offering logical problem-solving activities with objective exercise format: true/false; multiple choice; matching, etc.	offering intuitive solving problem-solving activities with open-ended format: short answers, essays, etc.
giving more task-oriented, analytical exercises	giving more social-oriented exercises: field trips, interview, role-play, etc.
allowing students to work independently or with a compatible peer	grouping students into pairs to work collaboratively

Table 2- Language Learning Strategies

Metacognitive Strategies	
MetacognItive planning	Deciding the purpose of a particular language learning task (e.g., learn to make a reservation by watching an anecdote in a movie)
Advance organization	Previewing an upcoming learning passage or activity, and linking it with what is already known
Selective attention	Deciding in advance to focus on important aspects of language input and to ignore distractions
Self-monitoring	Checking one's understanding while listening/reading and identifying errors in speech/written production
Self-evaluation	Judging how well one has learned the material by analyzing

	one's own written work or checking one's reading record.
Cognitive Strategies	
Resourcing	Using reference materials such as dictionaries, grammar books, tapes, TV, and video cassettes for receiving and transmitting messages
Grouping	Classifying words and concepts according to their attributes or in personally meaningful groups
Inferencing	Making guesses based on previous knowledge such as guessing meanings of unfamiliar words with linguistic clues or predicting outcomes using background knowledge
Reasoning	Using the entire linguistic and extralinguistic context to understand/produce the target language, or applying prior knowledge to facilitate the acquisition of new knowledge
Elaboration	Making learning material concrete and personally meaningful by integrating the new material into existing semantic networks and by relating items to one another to make relationships explicit
Note-taking	Writing down key words and points in abbreviated form to sort or organize language information
Visualizing	Visualizing settings of a listening/reading passage to understand and remember new information
Socio-Affective Strategies	
Lowering Anxiety	Reducing anxiety by listening to soothing music, or reading humorous stories, or reminding oneself of progress by using the self-talk technique or by writing progressive journals
Asking questions	Asking the speaker (a teacher or a peer) to give additional explanation, example or verification
Cooperation	Working with peers to solve problems, build confidence, and pool information

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